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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/762,513	07/24/2001	Harald Bonsel	1998/F-751	4848

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EXAMINER

WINTER, GENTLE E

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 09/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/762,513

Applicant(s)

BONSEL, HARALD

Examiner

Gentle E. Winter

Art Unit

1746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-3 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. In claim 1 it is not clear what is intended by “two terminal plates which clamp in a membrane”. The word “in” is confusing.
4. Claim 2 recites the limitation "frame element" in the last line. This appears to be the first time this element is introduced. Please clarify what constitutes the “frame element”.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application 0 499 593 A1, (hereinafter ‘593). Claim 1 is drawn to a PEM fuel cell which comprises at least two terminal plates (5 and 5’) which clamp in a membrane (2) which, apart from the outermost edge, is covered on both side by an electrode layer, the covering of the membrane with at least one electrode (3 and 4) layer projecting into the structural edge region of

Art Unit: 1746

the fuel cell. The same is identically disclosed in figures 1 and 2 and relevant associated text of the '593 reference. The product water in the structural edge region (reservoir) of the fuel cell is utilized to wet the membrane. See e.g. page 3 line 27 *et seq.*

3. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by European Patent Application 0 589 850 A1 (hereinafter '850). The '850 reference of figure 3 and relevant associated text discloses two terminal plates (tightening plate) which clamp in a membrane (4) which, apart from the outermost edge, is covered on both side by an electrode layer, the covering of the membrane with at least one electrode (3 and 5) layer projecting into the structural edge region of the fuel cell. The same is identically disclosed in figures 2 and 3 and relevant associated text of the '593 reference, and edge region seal (12) are arranged between the membrane and the frame.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over, in the alternative '593 or '850 and United States Patent No. 5,858,569 to Meacher et al.
2. Each and every limitation of claim 4 is disclosed in every one of the above references, as set forth above, except that each reference apparently fails to explicitly disclose the indicated stack design. It is noted that the general concept of stacking cells is well known in the art and

Art Unit: 1746

believed to be inherent in the references. Nonetheless, to be rigorous Meacher is provided for the missing element and the motivation for making the combination.

3. Meacher discloses that most fuel cells produce "voltage in the range of 0.4 to 0.8 volts. Practical applications require that multiple cells be assembled to be in series electrically, enabling the delivery of current at voltages from 6 to 120 volts. Such assemblies are referred to as "stacks" and the cells are sequentially physically stacked and clamped together." The artisan seeking a power supply between 6 and 120 volts would have been motivated to operatively interconnect a plurality of fuel cells.

Election/Restriction

4. Applicant is put on notice that the invention, as currently claimed, may properly be subjected to a restriction/election requirement. All claims have been treated in this Official action because searching the various inventions did not present an undue burden. Nonetheless, substantive amendment of the claims, or the addition of new claims, which would require an additional search may result in a restriction/election requirement.

Conclusion

5. This examiner notes that the claims appear to share many features with the prior art of record. Applicant is encouraged to contact this examiner if applicant feels that doing so would assist in the identification of patentable subject matter.

6. This examiner substantively concurs with the opinion of the International Searching Authority, a copy of which is in the file. As the search report indicated the prior art of record is replete with anticipatory references for claims 1-3. The references are not explicitly repeated

Art Unit: 1746

here because doing so would do little to advance prosecution or clarify issues. Suffice it to say that the references are substantially cumulative with those cited herein.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Gentle E. Winter whose telephone number is (703) 305-3403.

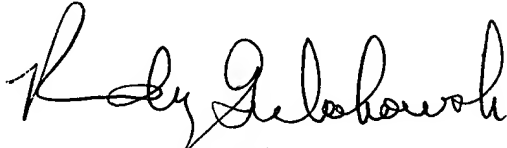
The examiner can normally be reached on Monday-Friday 7:00-3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy P. Gulakowski can be reached on (703) 308-4333. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications. The direct fax number for this examiner is (703) 746-7746.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Gentle E. Winter
Examiner
Art Unit 1746

September 8, 2003


RANDY GULAKOWSKI
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700